

## WHAT IS CLAIMED IS:

1. A method of self-referencing a structure having an exterior mappable by a light gauge system, the method comprising the steps of:  
applying an identifying marker to the exterior of the structure; and  
creating a contour map representation of the structure such that said identifying marker forms part of said map representation.
2. The method of claim 1 further comprising the step of:  
indexing said contour map representation of the structure with said identifying marker in a searchable database.
3. The method of claim 1 wherein said identifying marker is established as a raised pattern on the exterior surface of the structure.
4. The method of claim 3 wherein said raised pattern is formed by machining the exterior surface of the structure to create said identifying marker.
5. The method of claim 1 wherein said identifying marker is established as a bar-code label adhesively applied to the exterior surface of the structure.
6. The method of claim 1 wherein said identifying marker is a serial pattern uniquely associated with the structure.
7. The method of claim 1 further comprising the step of tracking the fabrication or service life of the structure using said identifying marker.

8. An identified structure comprising an exterior surface, wherein the exterior surface includes an identifying marker readable by a light gauge system.

9. The structure of claim 8 wherein said identifying marker is a raised serial pattern machined into the exterior surface of the structure.

10. The structure of claim 8 wherein said identifying marker is a coded label adhesively applied to the exterior surface of the structure.

11. The structure of claim 8 wherein the structure is a turbine bucket.

12. The structure of claim 8 wherein said identifying marker forms a part of a mapped and searchable computer-based representation of the structure.

13. The structure of claim 8 wherein said identifying marker is applied to a region of the exterior surface that is not critical for measurement of acceptance of the structure.